[Journal of Geophysical Research: Biogeosciences]

Supporting Information for

Parameterizing air-water gas exchange in the shallow, microtidal New River estuary

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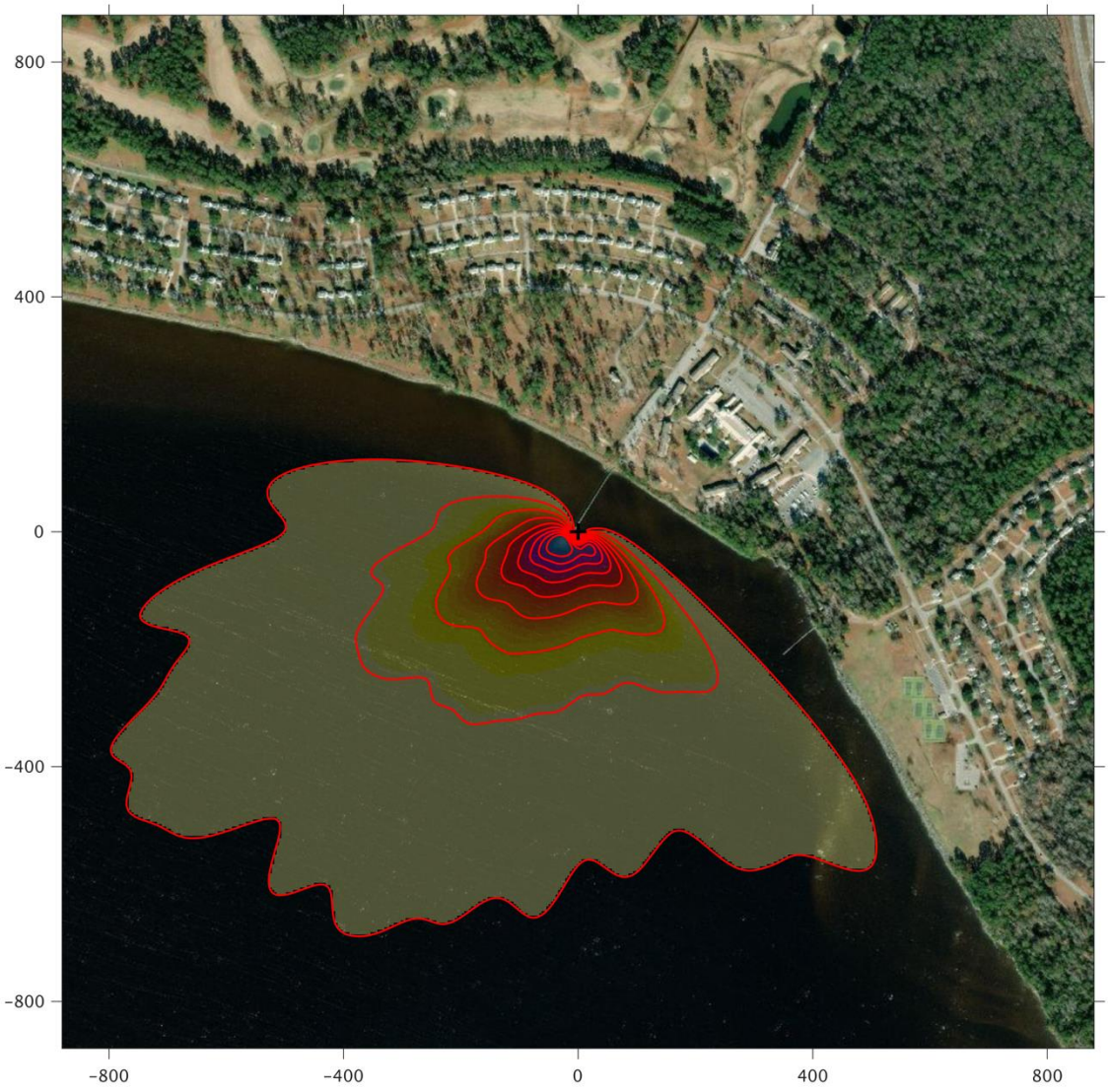

Figure S1. Footprint climatology for the New River estuary EC tower (using: Kljun et al., 2015), calculated from hourly QA/QC'd data. The black plus (+) depicts the location at which measurements were made. Footprint contour lines are shown in steps of 10 % from 10 to 90 %. The X- and Y-axis shows the distance in meters from the EC tower.

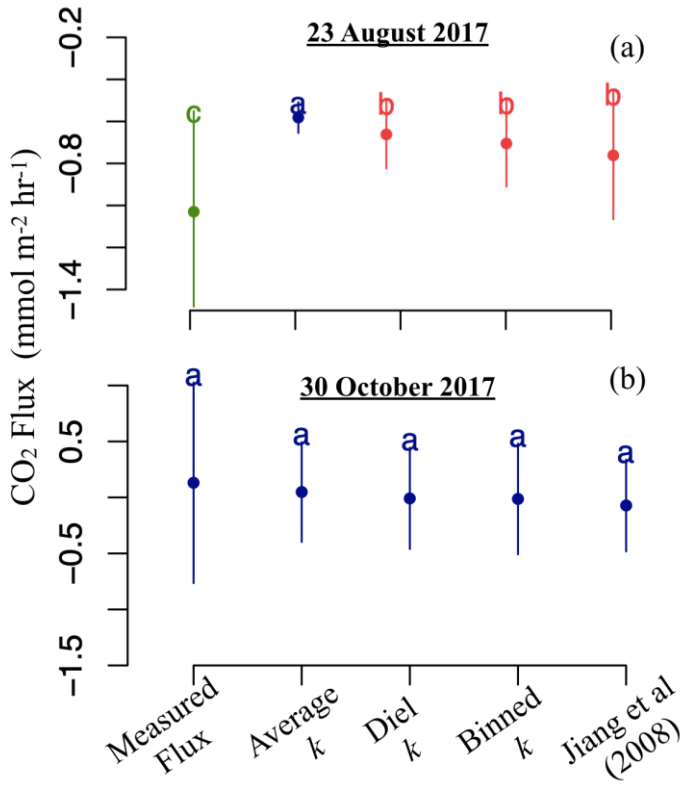

Figure S2. Box plots of average daily CO_2 flux (mmol m^{-2} hr^{-1}) for the two representative days, 23 August 2017 (a) and 30 October 2017 (b), shown in figure 8. Differences were analyzed by one-way ANOVA, and a Tukey's least significant difference post-hoc procedure ($\alpha = 0.05$). Numbers indicate significant differences between group means. The lack of numbers in (a) indicates that the ANOVA revealed no significant effect of different *k* parameterizations on calculated CO_2 flux.

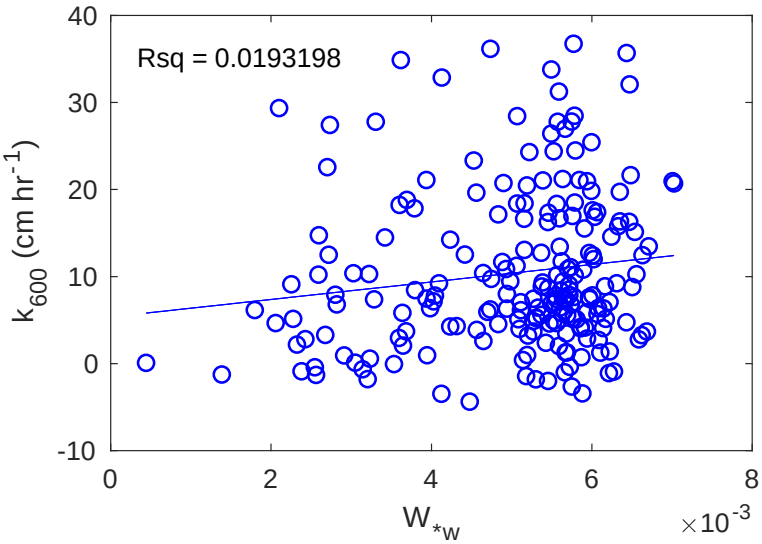

Figure S3. Relationship between convective velocity scale and k_{600}, showing linear fit and corresponding correlation coefficient (Rsq).